

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-23. (canceled)

24. (currently amended) A GaN light emitting diode, comprising:

a first conductive GaN clad layer which is a GaN crystalline layer doped with an n-type impurity;

a first contact formed on and in direct contact with an upper surface of the first conductive GaN clad layer;

an active layer formed on a lower surface of the first conductive GaN clad layer;

a second conductive GaN clad layer formed on a lower surface of the active layer, wherein the second conductive GaN clad layer is a GaN crystalline layer doped with a p-type impurity;

a conductive adhesive layer formed below the second conductive GaN clad layer;

a conductive substrate formed on a lower surface of the conductive adhesive layer;

a second contact formed on a lower surface of said conductive substrate; and

The GaN light-emitting diode as set forth in claim 5, further comprising a reflective layer made of a conductive material and formed between the second conductive GaN clad layer and the conductive adhesive layer;

wherein

the conductive adhesive layer is made of a material selected from the group consisting of Au-Sn, Sn, In, Au-Ag and Pb-Sn; and

the reflective layer has a uniform thickness and covers the entire lower surface of the second

conductive GaN clad layer, the reflective layer being in direct and ohmic contact with the second conductive GaN clad layer throughout the entire lower surface of the second conductive GaN clad layer.

25. (previously presented) The GaN light emitting diode as set forth in claim 24, wherein the reflective layer is made of a material selected from the group consisting of Au, Ni, Ag, Al and alloys thereof.

26. (currently amended) The GaN light emitting diode as set forth in claim [[5]] 24, wherein the conductive substrate is made of a material selected from the group consisting of silicon (Si), germanium (Ge) and GaAs.

27. (currently amended) The GaN light emitting diode as set forth in claim [[5]] 24, wherein the active layer is in direct contact with the lower surface of the first conductive GaN clad layer.

28-31. (canceled)

32. (previously presented) The GaN light emitting diode as set forth in claim 24, wherein the reflective layer is in direct contact with both the second conductive GaN clad layer and the conductive adhesive layer.

33. (previously presented) The GaN light emitting diode as set forth in claim 32, wherein the active layer is in direct contact with the lower surface of the first conductive GaN clad layer.

34. (previously presented) The GaN light emitting diode as set forth in claim 33,

wherein the second contact is in direct contact with and covers the entire lower surface of said conductive substrate.

35. (previously presented) The GaN light emitting diode as set forth in claim 24, further comprising

an upper surface defined together by said first contact and said upper surface of the first conductive GaN clad layer;

a lower surface defined by a lower surface of said second contact; and

opposite side surfaces extending between and connecting said upper and lower surfaces of said diode;

wherein the reflective layer extends continuously without interruption from one of said side surfaces to the opposite one of side surfaces.

36. (previously presented) The GaN light emitting diode as set forth in claim 35, wherein the reflective layer is in direct contact with both the second conductive GaN clad layer and the conductive adhesive layer.

37. (previously presented) The GaN light emitting diode as set forth in claim 36, wherein the active layer is in direct contact with the lower surface of the first conductive GaN clad layer.

38. (previously presented) The GaN light emitting diode as set forth in claim 37, wherein the second contact is in direct contact with and covers the entire lower surface of said conductive substrate.